

PATENT CLAIMS

1. Device for reducing the output current of a primary switched battery charger, which charger comprises an input DC power circuit, a high frequency transformer and a control unit for modulating the DC input power, c h a r a c t e r i s e d in that it comprises
 - means for measuring pulse ratio of switch pulses on the output side of the charger;
 - means for measuring peak value of output voltage;
 - means for differentially amplifying the signals measured; and
 - means for integrating voltage/current of the differentially amplified signals, wherein the integrated voltage/current is used for modulating the input DC power in order to reduce the output current.
2. Device according to claim 1, characterised in a switch capable of switching on and off the connection between the means for differentially amplifying and the means for integrating.
3. Device for reducing the output current of a primary switched battery charger, which charger comprises an input DC power circuit, a high frequency transformer and a control unit for modulating the DC input power, c h a r a c t e r i s e d in that it comprises:
 - means for measuring the output effect of the charger;
 - means for measuring the output voltage of the charger;
 - means for dividing the signals measured; and
 - means for multiplexing voltage/current of the output from the means for dividing, wherein the multiplexed voltage/current is used for modulating the input DC power in order to reduce the output current.
4. Device according to claim 3, wherein the means for measuring the output effect of the charger is arranged to measure the pulse ratio of switch pulses on the output side of the charger.

5. Device according to claim 3 or 4, wherein the means for measuring the output voltage of the charger is arranged to measure the peak value of the output voltage.
- 5 6. Device according to claim 3 or 4, wherein the means for measuring the output voltage of the charger is arranged to measure the effective value of the output voltage.
7. Device according to any of claim 5 or 6, wherein the means for dividing
10 the signals measured is arranged to:
 compare the signals measured;
 obtain a resulting signal by subtracting the pulse ratio from the effective value or the peak value; and
 invert the resulting signal.
- 15 8. Device according to any of claims 3-7, wherein the means for multiplexing the voltage/current is arranged to:
 integrate the output voltage and the output from the means for dividing the signals.
- 20 9. Device according to any one of claim 3-8, further comprising a switch capable of switching on and off the connection between the means for dividing and the means for multiplexing.
- 25 10. Method for reducing the output current of a primary switched battery charger, which charger comprises an input DC power circuit, a high frequency transformer and control unit for modulating the DC input power, c h a r a c t e r i s e d in the steps of:
 measuring the output effect of the charger;
30 measuring the output voltage of the charger;
 dividing the signals measured; and

multiplexing voltage/current of the output from the means for dividing, wherein the multiplexed voltage/current is used for modulating the input DC power in order to reduce the output current.

- 5 11. Method according to claim 10, wherein the step of measuring the output effect comprises the step of:
 measuring the pulse ratio of switch pulses on the output side of the charger.
- 10 12. Method according to claim 10 or 11, wherein the step of measuring the output voltage comprises the step of:
 measuring the peak value of the output voltage.
- 15 13. Method according to claim 10 or 11, wherein the step of measuring the output voltage comprises the step of:
 measuring the effective value of the output voltage.
- 20 14. Method according to claim 12 or 13, wherein the step of dividing the signals comprises the steps of:
 comparing the signals measured;
 obtaining a resulting signal by subtracting the pulse ratio from the effective value or the peak value; and
 inverting the resulting signal.
- 25 15. Method according to any one of preceding claims 10-14, wherein the step of multiplexing the signals comprises the step of:
 integrating the signals.
- 30 16. Method according to any one of preceding claims 10-15, further comprising the step of:
 switching on and off a low-current area of the charging.

17. Method for reducing the output current of a primary switched battery charger, which charger comprises an input DC power circuit, a high frequency transformer and a control unit for modulating the DC input power, c h a r a c t e r i s e d in the steps of:
- 5 measuring pulse ratio of switch pulses on the output side of the charger;
- measuring peak value of output voltage;
- differentially amplifying the signals measured;
- integrating voltage/current of the differentially amplified signals,
- 10 wherein the integrated voltage/current is used for modulating the input DC power in order to reduce the output current.
18. Computer readable medium comprising instructions for bringing a
- programmable device to perform the method according to any one of
- 15 claims 10-17.